Rutherford Barn
East Hansel Road
Minooka Vicinity
Grundy County
Illinois

HABS No. IL-1151

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32-MINK,
1-

MEASURED DRAWINGS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C. 20013

HABS
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32-MINK,
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HISTORIC AMERICAN BUILDINGS SURVEY

RUTHERFORD BARN

HABS No. IL-1151

Location: East Hansel Road, approximately 5.2 miles west of Minooka, Grundy County, Illinois.

USGS Minooka Quadrangle
UTM Coordinates: 16.392980.4584020

Present owner: Celia Dollinger

Present use: Barn and storage

Significance: This heavy timber barn is one of the few remaining mid-nineteenth century structures built directly on the canal. The barn's possible use as a mule barn serving canal transportation adds to its interest.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: 1830s or '40s. Grundy County Illinois Landmarks dates the barn's construction between 1842 and 1845, although that date may refer to construction of the south section of the barn, which was built against the berm of the canal. The older south section of the structure could have been built as early as the 1830s. Canal Survey documents in Springfield relate that Salmon Rutherford had two barns on his property in 1837.

2. Architect: Unknown.

3. Original and subsequent owners: The following is a chain of title to the property described as the north fraction of the northeast 1/4, north fraction northwest 1/4, section 26, township 34, range 2. Reference is to the Grundy County Recorder and the Grundy County Clerk, Morris, Illinois.

1837 Exemplification of Patent, March 16, 1837, filed May 16, 1929
Book 148 page 176, Certificate 1687
United States of America
to
Salmon Rutherford

1855 Agreement to purchase, March 1, 1855, filed January 22, 1857
Book R pages 17-19
Salmon Rutherford
to
B. H. Streeter

1858 Deed May 24, 1858, filed March 1859
Book U, pages 487-490
Rutherford's widow and heirs
to
B. H. Streeter

1875 Master in Chancery Deed, filed January 7, 1871
Book 42 page 291
Amelia L. Streator, et. al.
to
Jacob Hansal[sic]

1921 Will filed February 21, 1921, probated April 4, 1921
Jacob Hansel
to
Frank Hansel and Charles Hansel

1966 Will filed July 26, 1966, probated September 8, 1966. Joint will of Frank and Charles Hansel, each wills his estate to the other. Frank died first, leaving entire estate to Charles.

1971 Will filed September 20, 1971
Charles Hansel
to
Celia Dollinger, niece

4. Builder and supplier: This is Grundy County tells that Salmon Rutherford came to Dresden, built a sawmill and used his lumber to build his inn. The materials for the barn probably also came from Rutherford's sawmill.

5. Original plans and construction: Physical evidence indicates two periods of construction. The north half of the barn probably predates the south half. After the canal berm was completed, it would have been logical that the south section, which opens directly onto the canal, was added to the existing building. The addition of the south section made it possible to adapt the building to a specific use, such as mule stabling.

Evidence of two periods of construction is seen in the foundation walls, the sill beams and in the knee braces in each of the seven bents. The foundation walls of the north section are 2'-3" thick, while the south section has foundation walls between 2'-6" and 3"-0" thick. There are 15" wide sill beams in three sides of the north section of the barn, the north wall having been altered with an 8" wide sill. The south section walls have 12" wide sill beams. Single knee braces appear in the bents at the north and south walls of the barn. Single knee braces also appear in the center bent, indicating that this was formerly an end wall. There are paired knee braces in the remaining bents of both sections of the barn.

6. Alterations and additions: An important alteration to the barn has been the addition of a hay track in the roof structure. The roof was originally a king post truss with inclined struts carrying the load from purlins at the midpoint of the rafters down to the lower chord. The king posts were removed, along with the center section of the lower chords, when the hay track was installed. The lateral thrust on the lower chord was resisted by new members added about two feet below the chord section that was cut out. Empty joist pockets indicate that the loft and attic floors were removed in the north section. This may have been done to facilitate hay storage.

   In 1908 a stone was removed at the ground level of the west wall to install a concrete drain for a dairy operation. A concrete floor also replaced the original dirt floor. The 1908 date is scratched in the drain. A concrete sill dated 1924 is in the window in the north facade.

   Two-by-four stud construction shows that the walls of the storage area in the southwest corner of the canal level have been added.

B. Historical Context

The Rutherford Barn was built across the road from Salmon Rutherford's Dresden Inn. The inn still stands and now serves as a farmhouse. According to the History of Grundy County, Illinois (1882), Rutherford came to Aux Sable Township in 1833, purchased land in section 26, set up a sawmill and built the locality's first inn. Rutherford built his inn on an established road, as is shown in Chapman's Sectional Map of Illinois (1856) and the New Sectional Map of the State of Illinois compiled form United States Surveys (1857). The History of Grundy County reports that the Frink and Walker stage

line served the area and that Rutherford's settlement flourished as a village named Dresden. "The stage line made his tavern a point for changing horses and gave Dresden the prestige of a post office" ("Dixon and Dresden in 1842"). Dresden also had another inn, Peltier's, and St. Mary's Catholic Church. St. Mary's Cemetery is still across the road from the Rutherford Barn. Business in Dresden flourished until about 1858 when activity was moved to Minooka because the newly built railroad passed through that town.

Salmon Rutherford apparently had high ambitions for his Dresden settlement. Grundy County Deed Book AA, page 6, shows that Dresden was surveyed and platted by Samuel Bullock, Deputy Surveyor for LaSalle County. The survey was dated March 9, 1835, the townsite consisting of 63 blocks. According to Deed Book 142, page 442, "no street or alley on plat was ever opened up, used, or improved, no structure ever built on any lots or blocks in the plat." Local landowners, including Frank Hansel, who then owned Rutherford's land, complained that for sixty years the land had been conveyed and transferred by descriptions other than plat lots. They therefore petitioned that the plat be vacated. On June 11, 1929, the County Board of Supervisors approved a deed of vacation.

It is evident from Illinois and Michigan Canal Records at the Illinois State Archives that Rutherford's establishment was important to the early business of the canal. During the 1830s canal survey, workers were able to purchase provisions such as milk and dinner from Rutherford. Salmon Rutherford's buildings were also important in defining the location of the line of the canal. On August 27, 1837, one surveyor noted that station 1332 of the canal line was "Opposite Mr. Rutherford's house." The next site notation was "Opposite Mr. R's. barns." In addition, records indicate that there was an "office" next to Rutherford's property, possibly a canal office. The History of Grundy County also tells that during canal construction a few buildings came and went, suggesting that Dresden was of some importance during the period the canal was being built.

There is a strong possibility that the barn was used as a mule barn, although the barn is on the opposite side of the canal from the towpath. It would have been difficult as well as impractical to build the barn on the towpath side of the canal, however. Firstly, the barn is located on the same side of the canal as the road, thus making it easier for farmers to bring grain or other supplies to the barn. Secondly, before the Dresden Lock and Dam was built in 1933, the land between the I & M Canal and the Illinois River was low-lying marsh, not suitable for building construction. The Map of the Illinois and Des Plaines River from Lockport to the Illinois River shows that there was limited space to construct buildings between the canal and river. Finally, many communities along the I & M Canal

(for example, Morris) show that buildings were often located on the opposite side of the towpath. According to Dave Carr of the Illinois Department of Conservation, this is geographically very practical, as the north side of the canal provides a natural berm. In areas such as Morris, Dresden, and Channahon where the canal ran in close proximity to the Illinois River, the land naturally declines toward the river. This means that the north side of the canal would not have needed to have been built up as much to provide the berm and area for erecting buildings. This made it more logical, therefore, to build the towpath on the opposite, or south side, of the canal.

The question, however, still remains, how did early boatmen get the mules from one side of the canal to the other? According to Richard Garrity's account of his life on the Erie Canal, Canal Boatman: My Life on Upstate Waterways, mule drivers changed teams by means of a "horsebridge," a bridge (probably a plank) which was run out from the boats to the canal bank. The "horsebridge" was then pulled aboard the boat. Garrity stressed that mules were strong, intelligent and sure-footed creatures, sensibly-minded and able to get on and off canal boats better than horses could.

James Lee has edited oral histories of life on the Morris (New Jersey) Canal in his work, Tales the Boatmen Told (1977). Interviews indicate that there were many ways in which mules were kept and cared for, one of which was on-boat stabling. Some boats were equipped with stables in the bow end so that mules could be changed and fed as required. Apparently most boats carried feed and the mules would be fed by "nosebaskets." Even though boats were equipped with stables and drivers fed them from the boats, stabling did exist along the Morris Canal. One interviewee related that there were stores all along the canal, and that stabling was also available. "There were many fine stables along the canal where you could put your teams in overnight. The charge was 25 cents and you got hay for two animals." One woman's father owned a store where boatmen could get supplies and a mule stable if they needed feed for the mules. She also described the store operations: "He had what was called a feed door in the store on the canal side that opened. And that's where they loaded and unloaded their feed. Those bags of feed for the mules."

In an oral history at Lewis University, canal boat captain William Schuler tells about life on the Illinois and Michigan Canal. Schuler drove mules during 1885 and 1886 and reported that mules generally worked for the boat. According to Schuler, three to five mules pulled a boat on a 200-350 foot line at no more than two miles per hour. The boats sometimes stopped along the route to rest and feed the mules, staking them to a post but they "never changed the mules." Schuler claims that mule barns existed when packet boats ran

in earlier years. He does not detail which years these were, however. He also says that there were stations where they could change teams, "every so often," although this seems contradictory to his claim that the mules were never changed. By the 1890s, mules seemed to be a thing of the past on the I & M Canal, steamboats having taken over from animal labor.

PART II. ARCHITECTURAL INFORMATION

A. General Statement

1. Architectural character: Built immediately on the berm of the Illinois and Michigan Canal, the barn is framed, heavy timber, post and beam construction. The construction is of mortise and tenon with wooden pegs. Physical evidence such as changes in the thickness of the foundation walls, sizes of the sills and configuration of the knee braces indicate two periods of construction. The north half of the barn is probably the older section.

2. Condition of the fabric: The barn is in fair condition. It needs a new roof as the present one has many holes. In the north section of the field (first) level, some east-west beams are beginning to crack and sag, especially where columns rest on these beams.

B. Description of Exterior:

1. Overall dimensions: The structure is rectangular, six bays long and three bays wide. The three-story barn measures 65'-4" x 26'. The field-level walls form two sections. The north section is enclosed on four sides while the south section is open on the north side to an 8'-10" wide passageway which separates the two sections of the barn at the field level.

2. Foundations: The foundation walls are limestone fieldstone. The walls of the north section are 2'-3" thick and define the perimeter of what was probably the original barn. There are openings in the north and south walls but not in the east and west walls. In the south section, the foundation walls form a "U" shape and are 3'-0" thick at the passageway and narrow to 2'-6" at the south end. Also in the south section are four footings for the two center posts of bents 5 and 6.

3. Wall construction: The remainder of the barn is board and batten over heavy timber post and beam construction. A 1'-2" high band of tin runs the perimeter of the building at the sill level. The walls are painted dark red.

4. Structural system, framing: The structural system is heavy timber post and beam construction with pegged mortise and tenon joints. The sill beams in the north section are 15" x 8" with the north sill replaced by an 8" x 8" sill. There are 12" x 8" sill beams in the walls of the south section. The joists are mostly 3" x 8". At the canal level the joists rest on top of the beams and are spaced 16" on center in the north section and passageway and 20" on center in the south section. At the loft and attic levels the joists were set into pockets cut in the beams. There are fourteen joist pockets and a center mortise for a longitudinal beam cut in the loft and attic level beams of each bent.

   There are seven structural bents. For descriptive purposes, the bents are numbered 1 through 7 with the north wall being bent 1 and the south wall being bent 7. Bents 1, 2, 3 and 4 were in the original north section and bents 5, 6 and 7 were in the south section. Each bent has four posts, three floor beams at the canal, loft and attic levels, and a king post truss supporting the roof. The two center posts of each bent are located 1' in from the third points, making the bay widths approximately 9' for the outer bays and 7' for the center bay. The roof truss is augmented by diagonal struts between purlins at the mid point of the rafters and the attic level beam.

   One of the interesting characteristics of the structural system is the extensive use of diagonal bracing. Each perimeter structural joint was braced in all three directions: north-south, east-west and up-down. Many of the braces have been removed but empty mortises indicate their locations. The braces give a tree-like appearance to the structural system.

   While the wooden structure seems more than adequate to carry the expected loads, there is a significant structural inadequacy in the north section. The end posts of each bent are supported by the continuous foundation walls. The two center posts are similarly supported by the foundation walls under bents 1, 4 and 7. The center posts in bents 5 and 6 continue down to supporting footings at the field level. In contrast, bents 2 and 3 in the north section span the full width of the barn, a clear span between the foundation walls of a little over 22'. The two beams that are the lower chord of bents 2 and 3 are thus the most heavily stressed part of what is otherwise a more than adequate design.

There is no evidence of mortises in the lower face of the two beams to indicate that posts had been removed. There is vague evidence that supporting posts were used at one time although none are present today. The problem was exacerbated when the loft and attic floor were removed, allowing three floors of hay to rest directly on the canal level floor supported by the two beams. Both beams have sagged, shearing the pegs at the joint between the center posts and either the canal level beam or the underside of the loft level beam, pulling the tenons partially out of their mortises.

Bents 1 and 4 were the original end walls. Both have single knee braces. Bents 2 and 3 have paired knee braces. The same pattern is followed in the south extension, where the end wall, bent 7, has single knee braces and the interior bents, 5 and 6, have paired knee braces. The spacing between bents, 10'-9" on center, is consistent in both sections.

5. Openings:

   a. Doorways and doors: At the field level, each end of the passageway is open. In the north end a doorway has been cut into the limestone wall, probably to facilitate livestock entrance to the dairy. At the canal level, there is a wooden swing door in the south end, providing direct access from the livestock manger to the canal. There are also three doors in the east side at the canal level, all of which are well above ground level. At the third level there are double swing doors on the east, north, and south.

   b. Windows: In the north end, two windows were cut in the limestone wall; one of these has been filled in. The other has a concrete sill and wooden lintel. There are other, randomly placed windows on the upper walls on the south, west, and east.

6. Roof:

   a. Shape, covering: The gable roof is covered with wooden shingles. The roof rafters are full 2" x 6", 20" on center and the ridgebeam is pentagonal, 6" on a side.

   b. Cornice: There is an elaborate cornice, with a deep fascia board, on the east and west sides.

C. Description of Interior:

1. Floor plans:

a. Field level: This level is divided into two sections with a passageway between. A manger which is two bays wide runs along the south side of the west end of the passageway.

The field level was altered to be used as a dairy in the early 1900s. In 1908 a stone at the ground level in the west wall was removed and replaced with a concrete drain. "1908" is scratched into the concrete. A 1924 date in the left window sill on the north facade indicates when the ooncrete floor was laid in the north section of the barn. It was probably at that time that the door was cut into the north wall and the 15" sill beam was replaced with an 8" sill beam.

b. Canal level: The second level of the barn opens directly onto the canal berm. The south end of the barn provided stabling for the mules. The mules came into the barn through the single swing door. Mangers were located across the width of the barn and divided the southern two bays from the remainder of the barn.

Two storage areas are located in the south end of the barn. The storage room in the southeast corner of the barn has planked walls to the height of the hay loft joists above. The storage area in the southwest oorner has walls of newer construction, having 2" x 4" studs and miscellaneous 1" planks.

The north section of the canal level is open and serves as hay storage. At the north end, a hole has been cut into the floor to allow farmers to throw hay into the dairy on the field level.

c. There is a hay loft at the south end of the barn above the canal level manger and storage rooms.

2. Stairways: There are no staircases in the barn. One ladder connects the canal level to the platform at the hayloft and another ladder leads from the hayloft to the roof beams above.

3. Flooring: The south section of the field level is a dirt floor. Since 1924 a concrete floor has replaced the dirt floor in the north section of the field level. The canal level and hay loft floorboards are 2" x 11".

4. Walls: The interior walls show the batten construction inside the exterior walls. The storage areas in the south end of the canal level have been planked partially or completely.

5. Doorways: An opening in the south wall of the north section leads into the breezeway. Doorways are also located in the two storage areas on the canal level.

6. Lighting: Electricity has been installed in the barn. Incandescent lights are located in the manger/storage bays on the canal level.

D. Site and General Setting: The barn is situated perpendicular to the berm on the north side of the Illinois and Michigan Canal. The barn is surrounded by fields on the north and east. On the west side, Dresden Run passes close to the barn and into a culvert under the canal. The old stage road, now East Hansel Road, runs to the north of the barn. Across the street is a farm, the farmhouse being the former Dresden Inn.

PART III. SOURCES OF INFORMATION

A. Primary Sources:

Atlas of Grundy County and the State of Illinois. Chicago: Warner and Beers, 1874.

Chapman's Sectional Map of Illinois. Milwaukee: Silas Chapman, 1856.

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Garrity, Richard. Canal Boatman: My Life on Upstate Waterways. Syracuse: Syracuse University Press, 1977.

Illinois and Michigan Canal Records, Series 491, Illinois State Archives, Springfield, IL.

Lee, James, ed. Tales the Boatmen Told. Exton, PA: Canal Press Inc., 1977.

Map of the Illinois and Des Plaines River from Lockport to the Illinois River. U.S. Army Corps of Engineers, sheet # 55, 1899.

New Sectional Map of the State of Illinois compiled from United States Surveys. Colton, New York, 1857.

Plat Book of Grundy County. Chicago: Alden and Ogle, 1892.

Probate Records, Grundy County Circuit Clerk, Morris, IL.

Standard Atlas of Grundy County. Chicago: Ogle & Co., 1909.

B. Secondary Sources:

"Dixon and Dresden in 1842." Chicago History 8 (Spring 1967): 75-84.

Grundy County, Illinois, Landmarks. Grundy County Historical Society, 1981. Volume 1.

Harlow, Alvin F. Old Towpaths. New York: Kennikat Press, 1924.

History of Grundy County. Chicago, 1882.

Ullrich, Helen Stine. This is Grundy County. Dixon: Grundy County Board, 1968.

C. Interviews:

Carr, David. Illinois and Michigan Canal State Park, Illinois Department of Conservation, Gebhard Woods Access, August 11 and 17, 1987.

Schuler, William. Lewis University Canal Archives. Recorded ca. 1956.

Prepared by: Dawn E. Duensing
Historian
National Park Service
August 25, 1987

PART IV. PROJECT INFORMATION

Documentation of three structures in the Illinois and Michigan Canal National Heritage Corridor was undertaken by the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), a division of the National Park Service, in the summer of 1987. These canal-related structures were identified as significant by previous surveys conducted by HABS/HAER in the I & M Canal Corridor. Under the general direction of Robert Kapsch, Chief

of HABS/HAER, the project was managed by historian Alison K. Hoagland and directed by architect John A. Burns, AIA. The field work was undertaken by architecture technicians Susan E. Keil (University of Houston), foreman, Ellen F. Stoner (University of Illinois), Gilbert E. Witte (University of Illinois), and historian Dawn E. Duensing (University of Northern Illinois). The drawings were edited by Frederick J. Lindstrom (Virginia Polytechnic Institute and State University) and the data were edited by Alison K. Hoagland and John A. Burns.

Addendum to
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PHOTOGRAPHS

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